

## **CONTROLLED HIGH EFFICIENCY LESION FORMATION USING HIGH INTENSITY ULTRASOUND**

### **Abstract of the Disclosure**

- An ultrasound system used for both imaging and delivery high intensity
- 5 ultrasound energy therapy to treatment sites and a method for treating tumors and other undesired tissue within a patient's body with an ultrasound device. The ultrasound device has an ultrasound transducer array disposed on a distal end of an elongate, relatively thin shaft. In one form of the invention, the transducer array is disposed within a liquid-filled elastomeric material that more effectively
- 10 couples ultrasound energy into the tumor, that is directly contacted with the device. Using the device in a continuous wave mode, a necrotic zone of tissue having a desired size and shape (e.g., a necrotic volume selected to interrupt a blood supply to a tumor) can be created by controlling at least one of the f-number, duration, intensity, and direction of the ultrasound energy administered.
- 15 This method speeds the therapy and avoids continuously pausing to enable intervening normal tissue to cool.